so	LICIT	ATION, OFFER AND	AWARD		NTRACT IS A RAT AS(15 CFR 700)	ED OR	RDER		RATIN	G				F PAGES
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2. CON	TRACT N	IO.	3. SOLICITAT	TON NO		4. TY		DLICITATION	5. DATE	ISSUED	6. REQUISITI	ON/PUR	CHASE NO.	
			DT	CG39-00-R-	R00010			D BID(IFB) TIATED(RFP)	4	1/3/00	2	1-00-39	DE00113	
7. ISSL	JED BY			CODE			8. ADDRESS OFFER TO (If		f other than	Item 7)	•			
	USC 108	ntracting Officer (1 CG Research and Deve 32 Shennecossett Roa oton, CT 06340-6096	elopment C	enter (R	&DC)									
NOTE:	In sealed	bid solicitations "offer" and "offero	r" mean "bid" and	d "bidder".										
					SOL	ICITA	TION							
9. Sea	led offers	in original and 3	copies for furr	nishing the sup	plies or services in	the Scl	hedule will	be received at th	e place spe	cified in Item 8,	or if handcarried	l,		
in the	e deposito	ory located in Room 323	_ 3, USCG R&	DC, Grot	on, CT			until	2:00 1	P. M.	local time	5/3/	00	
									(Hou	ır)	_	(Date)	_
CAUTIO	ON-LATE	Submissions, Modifications, and V	Vithdrawals: See	Section L, Pro	vision No. 52.214-	7 or 52.	.215-01. A						tion.	
10 EC	D INEO	RMATION A.	NAME					B. TELEPHONE	NO. (includ	e area code)(N	O COLLECT CA	LLS)		
10. FC	CALL:		Cat	hy Harringt	on/Joyce Overt	ton			(860) 441-28	74/2886			
					11. TABLE	OF C	ONTEN	гѕ						
(X)	SEC	DESCR	IPTION		PAGE(S)	(X)	SEC.			DESCRIPTION	N		P	AGE(S)
		PART I - THE	SCHEDULE						PART II	- CONTRACT	CLAUSES			
х	Α	SOLICITATION/CONTRACT FO	DRM		1	х	1	CONTRACT	CONTRACT CLAUSES			9-11		
х	В	SUPPLIES OR SERVICES AND	PRICES/COSTS	3	2			PART III - LIS	T OF DOCU	JMENTS, EXHI	BITS AND OTHE	ER ATTA	CH.	
Х	С	DESCRIPTION/SPECS./WORK	STATEMENT		2	х	J	LIST OF ATT	LIST OF ATTACHMENTS			12		
Х	D	PACKAGING AND MARKING 3 PART IV- REPRESENTATIONS AND INSTRUCTIONS		IONS										
Х	Е	INSPECTION AND ACCEPTAN	CE		3	х		REPRESENT	REPRESENTATIONS, CERTIFICATIONS AND					
Х	F	DELIVERIES OR PERFORMAN	CE		4		K	OTHER STATEMENTS OF OFFERORS			13-20			
Х	G	CONTRACT ADMINISTRATION	I DATA		5-7	х	L	INSTRS., CO	NDS., AND	NOTICES TO C	FFERORS			21-27
Х	Н	SPECIAL CONTRACT REQUIR	EMENTS		8	х	М	EVALUATION	FACTORS	FOR AWARD				28-29
				OFF	ER (Must be fu	Illy co	mpleted	by offeror)						
NOTE	: Item 12	2 does not apply if the solicita	tion includes th	ne provisions	at 52.214-16, M	/linimu	m Bid Ac	ceptance Perio	od.					
12. ln	complianc	e with the above, the undersigned	agrees, if this of	fer is accepted	within 120 calend	dar day	s (60 caler	ndar days unless	a different					
		ed by the offeror) from the date for				all item	s upon wh	ich prices are offe	ered at the p	rice set				
		em, delivered at the designated po												
		FOR PROMPT PAYMENT	10	CALENDAR D	AYS	%	20 CALEN	IDAR DAYS	% 3	0 CALENDAR [DAYS %	4	CALENI	DAR DAYS %
(See	Section I.	Clause No. 52-232-8)				/0			/0			0		/0
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		DLICITATION for offerors and nts numbered and dated):												
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454		CODE	l l		FACILITY	1	l .				N AUTHORIZED	TO SIGN]	
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15B. TELEPHONE NO. (include area Code) 15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE. ENTER SUCH ADDRESS IN SCHEDULE.					17. SIGNATURE		'	3. OFFER [DATE					
				AW	ARD (To be co	mplete	ed by Go	vernment)						
19. AC	CEPTED	AS TO ITEMS NUMBERED		20. Amou	nt		21. ACCO	UNTING AND AF	PROPRIAT	TON				
22. Al	JTHORIT	Y FOR USING OTHER THAN FUL	L AND OPEN C	OMPETITION:							П			
10	U.S.C. 2	304(c)() 41 U.S. C. 253 ((c)()					IT INVOICES TO pies unless other			 	TEM		
24. AI	OMINISTE	RED BY (If other than Item 7)	CC	DDE			25. PAYM	ENT WILL BE MA	ADE BY		<u>I</u>	CODE		
-	_	, ,		1								<u> </u>		
26. N/	AME OF C	CONTRACTING OFFICER (Type of	or Print)				27. UNITE	D STATES OF A	MERICA			2	B. AWARD	DATE
								(Sian	ature of Cor	ntracting Officer)			

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 SUPPLIES/SERVICES AND PRICES - FFP

ITEM	SUPPLIES/SERIVCES	QTY	UNIT	U/PRICE	AMOUNT
0001	Services in accordance with the Statement of Work (SOW), Attachment (1).	1	LO	\$	\$
0002	Data per Contract Data Deliverable List, Exhibit A to SOW.	1	LO	Not Separat	ely Priced

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 SCOPE OF WORK

Services shall be performed in accordance with the attached Statement of Work, (attachment (1)).

C.2 INCORPORATION OF TECHNICAL PROPOSAL

- A. Contractor's technical proposal is incorporated by reference as a specification. In the event of conflict between the provisions of the technical proposal and any other provisions of this contract (including but not limited to the Statement of Work), the conflict will be resolved in accordance with the clause entitled, Order of Precedence -- Uniform Contract Format (FAR 52.215-8). The technical proposal shall have lower precedence than any other specification. Any exceptions to contract clauses or other terms, included in the technical proposal shall not apply unless specifically identified in a bilateral award document.
- B. The Contractor shall not change or otherwise deviate from the content of the technical proposal without prior written approval of the Contracting Officer.
- C. For ease of administration, the Government may attach to the award documents extracts of non-proprietary data from the technical proposal.

(Next page starts Section D)

SECTION D - PACKAGING AND MARKING

D.1 F.O.B. Point

All items shall be shipped F.O.B. destination with all shipping and transportation costs prepaid.

D.2 Packaging

The Contractor shall ensure that all items are preserved, packaged, packed, and marked in accordance with best commercial practices to meet the packing requirements of the carrier and ensure safe delivery at destination.

D.3 Delivery of Data

- A. Data furnished hereunder shall be adequately packaged to assure safe delivery at destination.
- B. All copies of Data Deliverable items under this contract, regardless of distribution, shall be marked on the report cover with the following information:

U.S. Coast Guard Research and Development Center Contract and Deliverable Numbers Report Title Date of Report Contractor Name

SECTION E - INSPECTION AND ACCEPTANCE

E.1 52.246-4 Inspection of Services--Fixed-Price. AUG 1996

E.2 Government Review and Acceptance

- A. The Government will review and verify that all deliverables delivered under this contract fulfill the requirements and standards stated in this contract.
- B. Technical inspection and acceptance of all work, performance, reports, and other deliverables under this contract shall be performed by the designated Contracting Officer's Technical Representative (COTR).
- C. Final acceptance rests with the Contracting Officer.

SECTION F - DELIVERIES OR PERFORMANCE

F.1 52.242-15 Stop-Work Order. (AUG 1989)

F.2 Contract Period of Performance

The period of performance of this contract is [to be filled in at time of award].

F.3 Place of Performance

- A. Work will be performed at the Contractor's facility or other locations as required by the Statement of Work.
- B. The contractor is responsible for making all travel arrangements for its personnel.

(Next page starts Section G)

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 Responsibility for Contract Administration

- A. <u>Contracting Officer</u>: The Contracting Officer (CO) has the overall responsibility for this contract. The CO alone, without delegation, is authorized to take actions on behalf of the Government to amend, modify, or deviate from the contract terms, conditions, requirements, specifications, details and/or delivery schedules. However, the CO may delegate certain other responsibilities to his/her authorized representatives.
- B. <u>Contracting Officer's Technical Representative</u>: A Contracting Officer's Technical Representative (COTR) will be designated by the Contracting Officer. The responsibilities of the COTR include but are not limited to: inspecting and monitoring the Contractor's work; determining the adequacy of performance by the Contractor in accordance with the terms and conditions of this contract; acting as the Government's representative in charge of work at the site to ensure compliance with contract requirements in so far as the work is concerned; and advising the Contracting Officer of any factors which may cause delay in performance of the work. The COTR does not have the authority to make new assignments of work or to issue directions that cause an increase or decrease in the price of this contract or otherwise affect any other contract terms.

G.2 Contractual Authority and Communication

- A. Except as specified in subparagraph (b) below, no order, statement, or conduct of any Government personnel who visit the Contractor's facilities or in any other manner communicates with Contractor personnel during the performance of this contract shall constitute a change under the Changes clause of this contract.
- B. The Contractor shall not comply with any order, direction or request of Government personnel unless it is issued in writing and signed by the Contracting Officer, or is pursuant to specific authority otherwise included as a part of this contract.
- C. The Contracting Officer is the only person authorized to approve changes in any of the requirements of this contract and, notwithstanding provisions contained elsewhere in this contract, the said authority remains solely the Contracting Officer's. In the event the Contractor effects any change at the direction of any person other than the Contracting Officer, the change will be considered to have been made without authority and no adjustment will be made in the contract price to cover any increase in charges incurred as a result thereof.
- D. The Government reserves the right to administratively transfer authority over this contract from the individual named below to another Contracting Officer at any time.

E. The address and telephone number of the Contracting Officer is:

Name: [to be filled in at time of award]

Address: Contracting Office (fp)

U.S. Coast Guard Research and Development Center

1082 Shennecossett Road Groton, CT 06340-6096

Telephone: (860) 441-[]

G.3 COTR Appointment

A. The Contracting Officer hereby appoints the following individual as the Contracting Officer's Technical Representative (COTR) for this contract:

COTR: Name: [to be filled in at time of award]

Mailing Address: U.S. Coast Guard Research and Development Center

1082 Shennecossett Road Groton, CT 06340-6096

Telephone: (860) 441-[]

B. The COTR is responsible for those specific functions identified in the CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR) RESPONSIBILITIES, Attachment #2 and TAR CLAUSE 1252.252-73 incorporated by reference in Section I of this contract.

C. Only the Contracting Officer has the authority to modify the terms of the contract. Therefore, in no event will any understanding, agreement, modification, change order, or other matter deviating from the terms of the basic contract between the Contractor and any other person be effective or binding on the Government. If, in the opinion of the Contractor, an effort outside the existing scope of the contract is requested, the Contractor shall promptly notify the Contracting Officer in writing. No action shall be taken by the Contractor unless the Contracting Officer has issued a formal modification.

G.4 Performance Evaluation

A. A Performance Evaluation will be performed by the Government upon completion of this contract. The Contracting Officer or designee shall submit the completed evaluation to the Contractor for comment. The Contractor shall have 30 days in which to respond. The Government will consider any comments provided by the Contractor before finalizing the Performance Report and the Contractor's comments will be attached to the Report.

G.5 Cognizant DCAA

The	cognizant	DCAA	for	this	contract	is:
-----	-----------	------	-----	------	----------	-----

Office:	*
Address:	
Telephone	

* Offeror should fill in the above information, if known

G.6 Invoices for Progress Payments

(a) The Contractor shall submit all requests for progress payments on a SF 1442 "Contractors Request for Progress Payment" form, completed in accordance with the instructions on the reverse side of the form and in accordance with the clause entitled "Progress Payments" incorporated by reference in Section I of this contract.

(Next page starts Section H)

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 Technical Data Format

- (a) DOT Order 1700.18B, "Acquisition, Publication and Dissemination of DOT Scientific and Technical Reports," is cited in this contract as the required policy for the acquisition, publishing format, and dissemination of scientific and technical reports. As of the effective date of this contract, the current version of the USCG Research and Development Report Reference Guide shall be used in conjunction with DOT Order 1700.18B. This Reference Guide is a quick reference/formatting guide, and is available at http://www.rdc.uscg.mil. Once at the USCG Research and Development Center's website, the Reference Guide may be accessed by selecting Publications and then selecting Technical Report Publications Reference Guide.
- (b) This Reference Guide applies to technical data for the USCG Research and Development Center. For DOT technical data, DOT Order 1700.18B applies. For non-DOT technical data, specific guidance shall be provided with individual task orders.

(Next page starts Section I)

SECTION I - CONTRACT CLAUSES

I.1 52.202-1	Definitions. (OCT 1995)
I.2 52.203-3	Gratuities. (APR 1984)
I.3 52.203-5	Covenant Against Contingent Fees. (APR 1984)
I.4 52.203-6	Restrictions on Subcontractor Sales to the Government. (JUL 1995)
I.5 52.203-7	Anti-Kickback Procedures. (JUL 1995)
I.6 52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity. (JAN 1997)
I.7 52.203-10	Price or Fee Adjustment for Illegal or Improper Activity. (JAN 1997)
I.8 52.203-12	Limitation on Payments to Influence Certain Federal Transactions. (JUN 1997)
I.9 52.204-4	Printing/Copying Double-Sided on Recycled Paper. (JUN 1996)
I.10 52.209-6	Protecting the Governments Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment. (JUL 1995)
I.11 52.215-2	Audit and Records - Negotiation. (JUN 1999)
I.12 52.215-8	Order of PrecedenceUniform Contract Format. (OCT 1997)
I.13 52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing DataModifications. (OCT 1997)
I.14 52.219-4	Notice of price evaluation preference for HUBZone small business concerns. (JAN 1999)
I.15 52.219-23	Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns. (OCT 1999)
I.16 52.222-3	Convict Labor. (AUG 1996)
I.17 52.222-21	Prohibition of segregated facilities. (FEB 1999)
I.18 52.222-26	Equal Opportunity. (FEB 1999)
I.19 52.222-35	Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era. (APR 1998)
I.20 52.222-36	Affirmative Action for Workers with Disabilities. (JUN 1998)
I.21 52.222-37	Employment Reports on Disabled Veterans and Veterans of the Vietnam Era. (JAN 1999)
I.22 52.223-6	Drug-Free Workplace. (JAN 1997)
I.23 52.223-14	Toxic Chemical Release Reporting. (OCT 1996)
I.24 52.225-13	Notice of Buy American Act Requirement - Construction Materials under Trade Agreements Act and North American Free Trade Agreement. (MAY 1997)
1.25 52.225-14	Inconsistency Between English Version and Translation of Contract. (AUG 1989)
I.26 52.227-1	Authorization and Consent. (JUL 1995) Alternate I (APR 1984)
I.27 52.227-14	Rights in Data - General. (JUN 1987)
I.28 52.229-3	Federal, State, and Local Taxes. (JAN 1991)
1.29 52.229-7	Taxes - Fixed-Price Contracts with Foreign Governments. (JAN 1991)
I.30 52.232-2	Payments under Fixed-Price Research and Development Contracts. (APR 1984)
I.31 52.232-16	Progress Payments. (JUL 1991)
1.32 52.232-17	Interest. (JUN 1996)
I.33 52.232-23	Assignment of Claims. (JAN 1986)

I.34 52.232-25 Prompt Payment. (JUN	N 1997)
I.35 52.232-34 Payment by Electronic	Funds Transfer Other Than
Central Contractor Re	egistration. (MAY 1999)
I.36 52.233-1 Disputes. (OCT 1995)) Alternate I (DEC 1991)
I.37 52.233-3 Protest after Award.	(AUG 1996)
I.38 52.242-13 Bankruptcy. (JUL 199	95)
I.39 52.243-1 Changes - Fixed-Price	e. (AUG 1987) Alternate V
(APR 1984)	
I.40 52.246-25 Limitation of Liabil:	ityServices. (FEB 1997)
I.41 52.249-5 Termination for Conve	enience of the Government
(Educational and Othe	er Nonprofit Institutions).
(SEP 1996)	
I.42 52.253-1 Computer Generated Fo	orms. (JAN 1991)

I.43 52.244-6 Subcontracts for Commercial Items and Commercial Components. (OCT 1998)

- (a) Definitions.
- "Commercial item," as used in this clause, has the meaning contained in the clause at 52.202-1, Definitions.
- "Subcontract," as used in this clause, includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.
- (b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.
- (c) Notwithstanding any other clause of this contract, the Contractor is not required to include any FAR provision or clause, other than those listed below to the extent they are applicable and as may be required to establish the reasonableness of prices under Part 15, in a subcontract at any tier for commercial items or commercial components:
 - (1) 52.222-26, Equal Opportunity (E.O. 11246);
 - (2) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C. 4212(a));
 - (3) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793); and
 - (4) 52.247-64, Preference for Privately Owned U.S.-Flagged Commercial Vessels (46 U.S.C. 1241) (flow down not required for subcontracts awarded beginning May 1, 1996).
- (d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

I.44 52.252-2 Clauses Incorporated by Reference. (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

http://www.arnet.gov/far/
http://www.dot.gov/ost/m60/tamtar/

1.45 TRANSPORTATION ACQUISITION REGULATION (TAR) CLAUSES:

1252.242.73 CONTRACTING OFFICERS TECHNICAL REPRESENTATIVE (OCT 1994)

(Next Page starts Section J)

SECTION J - LIST OF ATTACHMENTS

J.1 LIST OF ATTACHMENTS

EXHIBIT "A"	TITLE Data Deliverables	PAGES
ATTACHMENT		
1	Statement of Work	6
2	COTR Responsibilities	1
3	List of Historically Black Colleges and Universities	6
4	OMBUDSMAN NOTICE TO OFFERORS	1

SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR QUOTERS

K.1 52.203-11 Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. (APR 1991)

K.2 52.203-2 Certificate of Independent Price Determination. (APR 1985)

- (a) The offeror certifies that -
 - (1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to -
 - (i) Those prices;
 - (ii) The intention to submit an offer;, or
 - (iii) The methods or factors used to calculate the prices offered.
 - (2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
 - (3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.
- (b) Each signature on the offer is considered to be a certification by the signatory that the signatory -
 - (1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; or
 - (2)(i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision [insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization];
 - (ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) of this provision have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; and

- (iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision.
- (c) If the offeror deletes or modifies subparagraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

K.3 52.204-3 Taxpayer Identification. (OCT 1998)

(a) Definitions.

government;

"Common parent," as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Taxpayer Identification Number (TIN)," as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

- (b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.
- (c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(a)	Taxpayer Identification Number (TIN).
[]	TIN:
[]	TIN has been applied for.
[]	TIN is not required because:
part cond an d	Offeror is a nonresident alien, foreign corporation, or foreign the that does not have income effectively connected with the duct of a trade or business in the United States and does not have office or place of business or a fiscal paying agent in the United tes;

[] Offeror is an agency or instrumentality of a foreign

[] Offeror is an age Government.	ency or instrumentality of the Federal
(e) Type of organizat	zion.
[] Foreign governmer	(not tax-exempt); (tax-exempt); (federal, State, or local); nt; ganization per 26 CFR 1.6049-4;
(f) Common parent.	
[] Offeror is not own paragraph (a) of this	wned or controlled by a common parent as defined in s provision.
[] Name and TIN of o	common parent:
NameTIN	
(MAY 1999)	wned Business (Other Than Small Business) tion. The offeror represents that it iness concern.
this provision, means a one or more women; or in least 51 percent of the	. "Women-owned business concern", as used in concern which is at least 51 percent owned by the case of any publicly owned business, at stock of which is owned by one or more women; daily business operations are controlled by
	Regarding Debarment, Suspension, Proposed asibility Matters. (MAR 1996)
(a)(1) The Offeror ce that -	ertifies, to the best of its knowledge and belief,
(i) The (Offeror and/or any of its Principals -
sus ine	Are [] are not [] presently debarred, spended, proposed for debarment, or declared eligible for the award of contracts by any Federal ency;

(B) Have [] have not [], within a three-year period

preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

- (C) Are [] are not [] presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.
- (ii) The Offeror has [] has not [], within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.
- (2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

- (b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- (c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.
- (d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- (e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the

Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

K.6 52.215-6 Place of Performance. (OCT 1997)

(a) The offeror or respondent, in the performance of any contract
resulting from this solicitation, intends, does not inten
(check applicable block) to use one or more plants or facilities
located at a different address from the address of the offeror or
respondent as indicated in this proposal or response to request for
information

(b) If the offeror or respondent checks "intends" in paragraph (a) of this provision, it shall insert in the following spaces the required information:

PLACE OF PERFORMANCE (STREET ADDRESS, CITY, STATE, COUNTY, ZIP CODE	NAME AND ADDRESS OF OWNER AND OPERATOR OF THE PLANT OR FACILITY IF OTHER THAN OFFEROR OR RESPONDENT

K.7 52.219-1 Small Business Program Representations. (MAY 1999) Alternate II (NOV 1999)

- (a)(1) The standard industrial classification (SIC) code for this acquisition is [insert SIC code].
 - (2) The small business size standard is [insert size standard].
 - (3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.
- (b) Representations. (1) The offeror represents as part of its offer that it [] is, [] is not a small business concern.
 - (2) (Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, as part of its offer that it (__) is, (__) is not a small disadvantaged business concern as defined in 13 CFR 124.1002.
 - (3) (Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it $[\]$ is, $[\]$ is not a women-owned small business concern.
 - (5) [Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.] The offeror shall check the category in which its ownership falls:

- 1		
Black	American.	

Hispanic American.
Native American (American Indians, Eskimos, Aleuts, or
Native Hawaiians).
Asian-Pacific American (persons with origins from Burma,
Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China,
Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The
Philippines, U.S. Trust Territory of the Pacific Islands
(Republic of Palau), Republic of the Marshall Islands, Federated
States of Micronesia, the Commonwealth of the Northern Mariana
Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati,
Tuvalu, or Nauru).
Subcontinent Asian (Asian-Indian) American (persons with
origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the
Maldives Islands, or Nepal).
Individual/concern, other than one of the preceding.

(c) Definitions.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

"Woman-owned small business concern," as used in this provision, means a small business concern -

- (1) Which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and
- (2) Whose management and daily business operations are controlled by one or more women.
- (d) Notice. (1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.
 - (2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small or small disadvantaged business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall -
 - (i) Be punished by imposition of fine, imprisonment, or both;
 - (ii) Be subject to administrative remedies, including suspension and debarment; and
 - (iii) Be ineligible for participation in programs conducted under the authority of the Act.

K.8 52.222-22 Previous Contracts and Compliance Reports. (FEB 1999)

(a) Tt	()	has.	()	has	not	participated	in	а	previous	contract	(

subcontract subject to the Equal Opportunity clause of this solicitation;

- (b) It $(_)$ has, $(_)$ has not filed all required compliance reports; and
- (c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

K.9 52.222-25 Affirmative Action Compliance. (APR 1984)

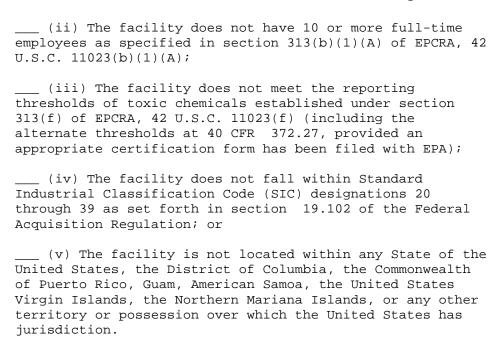
The offeror represents that -

The offeror represents that -

- (a) It ___ has developed and has on file, ___ has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2); or
- (b) It ___ has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

K.10 52.223-13 Certification of Toxic Chemical Release Reporting. (OCT 1996)

- (a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.
- (b) By signing this offer, the offeror certifies that -
 - (1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or
 - (2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (Check each block that is applicable.)
 - ___ (i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);



K.11 Request for Progress Payments

The Offeror shall indicate its need for Progress Payments by checking the below request for Progress Payments:

___ It is requested that any contract resulting from this solicitation contain a provision for progress payments.

(Next page starts Section L)

SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS OR QUOTERS

L.1 52.204-6	Data Universal Numbering System (DUNS) Number.
	(JUN 1999)
L.2 52.215-1	Instructions to Offerors - Competitive Acquisition.
	(DEC 1999)
L.3 52.215-16	Facilities Capital Cost of Money. (OCT 1997)

L.4 52.215-20 Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data. (OCT 1997)

- (a) Submission of cost or pricing data is not required.
- (b) Provide other information as described below:

See Cost Proposal Instructions, Section L.

L.5 52.216-1 Type of Contract. (APR 1984)

The Government contemplates award of a firm fixed price contract resulting from this solicitation.

L.6 52.252-1 Solicitation Provisions Incorporated by Reference. (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

http://www.arnet.gov.far/

L.7 52.233-2 Service of Protest (AUG 1996)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from:

Catherine Harrington Contracting Office (fp) USCG Research & Development Center 1082 Shennecossett Road Groton, CT 06340-6096 (b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

L.8 COAST GUARD ACQUISITION PROCEDURES (CGAP) PROVISIONS

Subcontracting with Historically Black Colleges and Universities (HBCUS)

- (1) Executive Order 12876 of 1 November 1993 established an objective for all Executive agencies to increase the opportunity for Historically Black Colleges and Universities (HBCUs) to participate in and benefit from Federal programs.
- (2) Attachment (3) is a list of HBCUs. If the offeror believes that any of these HBCUs may be able to participate in the performance of the work required under this solicitation, the offeror is encouraged to contact them for this potential subcontracting opportunity.

L.9 Other Instructions to Offerors

- A. It is the offeror's responsibility to ensure delivery of the proposal to the Bid Depository by the time and date specified on the solicitation form. FAR Provision 52.215-1 provides regulatory guidance concerning the timeliness of bids or proposals. Offerors should read this provision before determining which method of transmittal is appropriate.
- B. Clearly indicate the solicitation number and the closing time and date on the outside of the package containing the offer.

L.10 Pre-Award Point of Contact

A. The Pre-Award Points of Contract for this solicitation are:

Name: Cathy Harrington/Joyce Overton

Address: Contracting Office (fp)

U. S. Coast Guard Research and Development Center

1082 Shennecossett Road Groton, CT 06340-6096

Telephone: (860) 441-2874 (Harrington), (860)441-2886 (Overton)

L.11 Facsimile Proposals and Bids Not Authorized

Facsimile proposals (bids) are not authorized for this acquisition. "Facsimile proposal (bid)," as used in this solicitation, means a proposal (bid), modification of a proposal (bid), or withdrawal of a proposal (bid) that is transmitted to and received by the Government via electronic equipment that communicates and reproduces both printed and handwritten material.

L.12 Clauses and Provisions Which Require Offeror Completion

The following sections contain the indicated form, clauses, provisions, and attachments, which require offeror completion. Offerors should review the solicitation carefully and insert relevant data wherever required.

Section A - Forms SF33 (Solicitation/Contract). Blocks 12, 13, 14, 15(a), (b) and (c), 16, 17, and 18

Section B - Supplies/Services and Prices

Section G - Contract Administration Data Clause G.5

Section K - Representations, Certifications, and Other Statements of Offeror All required certifications and representations

L.13 Availability of Required Forms and Publications

Offerors will need a variety of required Government forms and publications in submitting offers and performing the contract. These are available as specified below; payment may be necessary.

- (1) Forms listed in FAR Section 53 (Standard Forms and Optional Forms) are available per FAR 53.107(b) from the Superintendent of Documents, U.S. Government Printing Office (GPO), Washington, DC 20402, telephone number (202) 512-1800. This is the best source of all Federal, non-DoD publications and documents, including TAR/TAM Sections 1253 (DOT Forms).
- (2) Forms listed in DFARS Section 53 (DD Forms) are available from the same activity as specifications (See Section L, FAR 52.211-2). This is the best source of DoD publications and documents.
- (3) Forms may also be available through the Contracting Officer.
- (4) In addition to Government sources, items may be available from public libraries and commercial sources.
- All U.S. Coast Guard Research and Development Center Contracting Office specific forms are attached; see Section J.

L.14 General Information

A. Proposal Identification

For ease of reference, that part of an Offeror's submission covering factors other than price, i.e., Past Performance, Facilities, Corporate Experience, and Technical Approach will be referred to in this RFP as the "Technical Proposal." That part of an Offeror's submission covering proposed price will be referred to as the "Price Proposal".

B. Award Without Discussions

The Government intends to evaluate proposals and award contracts based on the initial offer $(FAR \ 52.215-1(f)(4))$. It is particularly important that each Offeror be fully responsive in providing their best offer initially, since there may be no opportunity to revise proposals at a later date.

Offerors' initial proposals shall be reviewed to determine whether they satisfy the formal requirements of the solicitation. Those proposals

determined by the Government to be so grossly and obviously deficient as to be totally unacceptable on their face may be eliminated from further consideration before the initial evaluation.

An incomplete or deficient price proposal will impede the Contracting Officer from performing a complete price analysis. If an Offeror's initial price proposal is so grossly deficient or ambiguous that a reasonable price analysis cannot be performed, the Offeror's price proposal may be deemed unrealistic and the entire offer may be excluded from evaluation.

L.15 General Instructions for Technical and Price Proposal Preparation

A. Proposal Requirements

I. Volume I - Price Proposal

- (a) Offers must consist of the solicitation documents (completed and signed SF 33 (page 1 of the solicitation) including acknowledgment of any amendments; and a completed Representations, Certifications, and Other Statements of Offerors (Section K of the solicitation), detailed pricing, and any necessary information to support the pricing.
- (b) Detailed pricing includes, but is not limited to, proposed hours broken down by labor categories and corresponding direct labor rates, other direct costs (travel, hardware, subcontracting costs, material, etc.), indirect or burden rates (Overhead, G&A, etc.), and profit.
- (c) All information relating to pricing must be included in this volume of the proposal; under no circumstances shall pricing data be included elsewhere.
- (d) The price proposal should be prepared in sufficient detail to permit a thorough and complete evaluation by the Government without additional correspondence or communication. During its evaluation, the Government may request clarifications, answers to questions that assist in the Government's understanding of information contained in the price proposal, or the correction of minor omissions or errors that do not alter the offer. However, the Government anticipates making award on initial offers and does not expect to hold discussions. Consequently, offerors are advised that failure to provide a clear and concise and detailed price proposal may result in rejection of the offer if it is in the Government's best interest, rather than opening discussions.

II. Volume II - Technical Proposal

(a) Organization. The Technical Proposal shall include information and documentation in sufficient detail to clearly identify the offer's overall merit, divided into the following sections:

Past Performance Facilities Corporate Experience Technical Approach (b) Past Performance - Offerors will be evaluated on their performance under existing and prior contracts for similar services. Performance information will be used both for responsibility determinations and as an evaluation factor. References other than those provided by the offeror may be contacted by the Government and the information received may be used in the evaluation of the Offeror's past performance. Offerors must provide a list of contracts that it is currently performing or has completed within the past three years. The list must include all contracts that are clearly relevant such as those applicable contracts reflecting the following:

<u>Field Tests</u> - Experience conducting similar field experiments within the past three years. Experiments must have been conducted using high capacity pumps, filters of less than 100 micron pore size, natural assemblages of organisms, and multiple samples.

<u>Analysis</u> - Demonstrated experience in processing multiple samples from field experiments within the past three years. Reports of data analysis shall have addressed technical performance, sample variability, and variability of treatments.

Include the following information for each contract:

- 1) Contract number
- 2) Contract type
- 3) Total contract value
- 4) Description of contract work
- 5) Contracting Officer address and telephone number*
- 6) Contracting Officer's Technical Representative's address and telephone number*
- 7) Administrative Contracting Officer, if different from item 6, address and telephone number*
- 8) List of major subcontractors
- 9) Assessment of relevance to requirements identified in this solicitation.
- 10) Whether any final or interim contract past performance report was or has been issued by the contracting agency. Copies of the final or most current past performance report must be submitted for the five most relevant contracts. Copies of reports on other than the five contracts considered most relevant by the Offeror should not be submitted as part of the proposal, but may be obtained by the Government if the Government considers the contracts relevant.*
- * applicable for Government contracts. If contracts were/are with a commercial firm, Offerors must provide customer primary point of contact and telephone number.

If Offeror has no relevant past performance history, it must affirmatively so state. Offerors with no relevant past performance history, and Offerors that are unable to provide past performance reports after making all reasonable efforts will not be evaluated favorably or unfavorably under this criteria, in accordance with FAR 15.305.

In the case of a relatively new firm (i.e., established within the last 18 months), the Offeror may submit past performance information for

contracts on which its corporate management has performed, to supplement any past performance information for the firm itself; this shall be specifically noted in the proposal submission.

If the Offeror does not either include past performance history or affirmatively state that no past performance history exists or can be obtained, the Offeror's proposal may be ineligible for award.

(c) Facilities: Offeror must demonstrate that its facility meets the following requirements:

<u>Pumping Setup</u> - Pump must be capable of delivering 1000 - 1500 U.S. gallons per minute (gpm). Pump must be piped to allow representative water samples to be readily obtained at several points between intake and outflow.

<u>Water Access</u> - Pump and piping must have ready, unlimited access to natural water with typical assemblages of naturally occurring organisms.

<u>Holding Tanks</u> - Facility must provide holding tanks of at least 150 gallons to allow sample concentration. Tanks must be available to provide for triplicate sampling at a minimum of two different times. Tanks must be piped to pump in such a manner that tanks are simultaneously filled with representative water samples.

<u>Filtration</u> - Facility must provide a filtration setup capable of filtering 1500 US gpm flow with filter size of 40 - 50 microns.

 $\underline{\text{Turbidity}}$ - Facility must be capable of artificially raising turbidity of inflow water. Contractor must obtain all permits necessary to vary turbidity of natural body of water and to return treated water to the source.

 $\underline{\mathtt{Safety}}$ - Facility must meet all applicable federal and state safety requirements.

- (d) Corporate Experience Offerors shall provide a description of their relevant corporate capabilities to accomplish the Statement of Work and implement the concept described below. The description will include discussion of at least the areas listed below:
 - Qualifications of Offeror's essential personnel. Offeror's proposals shall include the use of personnel qualified to meet all requirements of the Statement of Work and must possess the abilities to meet all requirements as described below.
 - Offeror's proposed management approach (including management of any proposed subcontractors/consultants).
 - Offeror's capability of installing and piping filtration setup and secondary treatment equipment.
 - Offeror's capability of maintaining equipment during experiments.
 - Offeror's experience in obtaining and analyzing representative water samples from several points during the experiments.
 - Offeror's capability to conduct data analysis to compare technologies used.

• Offeror shall provide the names, position titles and qualificiations of all key personnel proposed to work on this contract. All key personnel proposed must have experience in conducting similar tests and analysis as follows:

 $\underline{\text{Field Tests}}$ - Experience conducting similar field experiments within the past three years. Experiments must have been conducted using high capacity pumps, filters of less than 100 micron pore size, natural assemblages of organisms, and multiple samples.

<u>Analysis</u> - Demonstrated experience in processing multiple samples from field experiments within the past three years. Reports of data analysis shall have addressed technical performance, sample variability, and variability of treatments.

- (e) Technical Approach Offerors shall provide a brief description of their preliminary concepts. The description shall include discussion of proposed means of accomplishing each of the subparagraphs in section 5 of the Statement of Work and design considerations such as:
 - Engineering Design Contractor's engineering design for setup of primary and secondary equipment must be approved by CG prior to field experiments.
 - Experimental Design Contractor's experimental design must be approved by CG prior to field experiments
 - Biological Protocols Biological protocols selected by the contractor must be reviewed and approved by CG prior to field experiments.
- B. COPIES Offerors must provide an original and two (2) copies of their Volume I Price Proposal and an original and three (3) copies of their Volume II Technical Proposal.

The maximum number of pages that may be submitted for the technical and cost/business proposals are as follows:

Volume I - Price Proposal - No Limit

Volumes II - Technical Proposal - 20 page limit (not including names and qualifications of proposed key personnel)

(Next page starts Section M)

SECTION M - EVALUATION FACTORS FOR AWARD

M.1 General

- A. <u>Basis for Award</u>. It is the Government's intent to make award based upon initial offers without entering into discussions or negotiations. Award will be made to the responsive and responsible Offeror whose offer provides the greatest overall value to the Government, based on the technical proposal, price proposal and other factors. While it is the Government's intent to make award based upon initial offers, the Government may, nevertheless, determine during the evaluation period that it is necessary to conduct discussions. In that case, the Contracting Officer will proceed to establish a competitive range and conduct negotiations with the firms in that range.
- B. $\underline{\text{Order of Importance}}$. The technical factors and price are of equal importance.
- C. Greatest Value Evaluation The price proposal evaluation will be combined with the technical proposal evaluation to determine the Offeror's overall value to the Government.

M.2 Proposal Evaluation

<u>General</u>. The technical proposal will consist of a written submission covering Past Performance, Facilities, Corporate Experience and Technical Approach. The price proposal will consist of a detailed breakdown of the total price proposed.

<u>Criteria for Evaluation</u>. The criteria for evaluation are described below. The five criteria will be given equal weight in evaluating proposals.

A. <u>Past Performance</u>. The purpose of this criterion is to assess the ability of the Offeror to perform successfully based upon an evaluation of its relevant past performance history on tasks of the type and complexity described in the Statement of Work (SOW). The Offeror's relevant past performance history will be evaluated for the following subcriteria, which are of equal importance: (1) quality of product/service; (2) timeliness of performance; (3) cost control; and (4) business relations; Only relevant past performance history will be considered.

If an Offeror has affirmatively stated that it has no relevant past performance history, and there is no evidence to the contrary, the Offeror will not be rated favorably or unfavorably on Past Performance.

- B. $\underline{\text{Facilities}}$: The offeror will be evaluated on whether its Facilities meet the requirements of this solicitation.
- C. <u>Corporate Experience:</u> The offeror will be evaluated on its ability to provide staffing who have the capability to perform the work requirements of this solicitation.
- D. <u>Technical Approach</u>. The offeror will be evaluated to assess: (1) the Offeror's technical understanding of the requirements of this solicitation and (2) the Offeror's approach to meeting the requirements of this

solicitation.

E. $\underline{\text{Price Proposal}}$ - The Offeror's price proposal will be evaluated for compliance with the RFP instructions.

(End of section M)

DATA DELIVERABLES

Deliverable: No.1

Title: Field Tests on Alternatives to Ballast Exchange, Interim

Report

SOW Reference(s): 6.0, 6.1

Reference/Guidance Documents: DOT Order 1700.18B, "Standards for the Preparation and Publication of DOT Scientific and Technical

Reports"

Submission / Distribution

Contractor shall submit interim report discussing tests and preliminary results obtained during Tasks A and B.

Copies:	Deliver to	$\underline{\text{No}}$.	Format	Date Due
Interim Repo	rt COTR	2	Paper	2/2/01

Deliverable: No. 2

Title: Field Tests on Alternatives to Ballast Exchange, Final

Report

SOW Reference(s): 6.0, 6.2

Reference Guidance Documents: DOT Order 1700.18B, "Standards for the Preparation and Publication of DOT Scientific and Technical Reports"

Submission/Distribution

Contractor shall submit final report discussing tests and results obtained during Tasks A and B. Report shall provide comparison of results of turbidity on treatments tested and comparison of standard filtration vice hydrocyclonic filtration.

Copies:	<u>Deliver to</u>	$\underline{\text{No}}$.	<u>Format</u>	Date Due
Draft Final Report	COTR	2	Paper	5/1/01
<u>-</u>	COTR COTR 4.0 compatible	3 1 (3.5	Paper Electronic,	
	diskette)(due			sided, mign

STATEMENT OF WORK

FIELD TESTS ON ALTERNATIVES TO BALLAST EXCHANGE

- 1.0 OBJECTIVE: The objective of this study is to test and investigate various alternatives to ballast water exchange at the pre-prototype stage. These tests are designed to determine the capability of the pre-prototype stages to kill or remove marine organisms and should not be construed as a Pass or Fail test. Acceptance of any engineering performance does not mean approval by the U.S. Coast Guard nor does it set any standards for regulatory purposes.
- 2.0 BACKGROUND: In an effort to reduce the risk of introduction of nonindigenous marine species to waters of the United States, Congress enacted the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA) (Pub. L. 101-646) on November 29, 1990. NANPCA contains specific provisions for controlling Aquatic Nuisance Species (ANS) and directly addresses the challenges of ballast water as a vector for exotic species. Included in NANPCA is a mandate that the U. S. Coast Guard promulgate regulations to prevent further ballast water introductions into the Great Lakes and Saint Lawrence Seaway.

On May 10, 1993, the resulting U.S. Coast Guard ballast water management regulations became effective for vessels traveling to the Great Lakes from beyond the Canadian or United states 200-mile-wide Exclusive Economic Zone (EEZ). These regulations mandate mid-ocean ballast water exchange as the current procedure to control the introduction of ANS to U.S. waters. It also stipulates that ballast water management practices should never compromise vessel safety.

On October 26, 1996, Congress enacted the National Invasive Species Act of 1996 (NISA) (Pub. L. 104-332), which amended and reauthorized NANPCA. NISA provides for ballast water management to prevent introductions and spread of ANS. It expands the scope of Coast Guard regulations to include all waters of the United States.

On February 3, 1999, President Clinton issued Executive Order 13112, "Invasive Species", which orders seven of its federal agencies to establish an Invasive Species Council in which all major stakeholders will be represented. The council will develop a cooperative strategy addressing escalated efforts to slow ANS invasions of American harbors. In August 2000, the

council will submit an invasive species management plan that will focus on ballast water as one of many vectors of transport.

In compliance with NISA, the Coast Guard published an interim rule which became effective July 1, 1999, for all vessels that operate outside the EEZ and wish to enter U.S. waters. The rule amends existing regulations for vessels entering the Great Lakes or Saint Lawrence Seaway and provides voluntary ballast water management guidelines for vessels entering all other ports.

NISA also requires that the Coast Guard regulatory guidelines become mandatory after three years unless the maritime industry shows a high rate of compliance under a self-policing system. Therefore the interim rule establishes a ballast management reporting provision which will assist the Coast Guard in assessing compliance for the next two years.

Currently the main option in minimizing risk of ANS introductions is to exchange ballast water in areas outside the 200-mile-wide EEZ and in ocean depths greater than 2000 meters. Most ANS are either fresh water or brackish water organisms that cannot survive in high salinity environments found in the open ocean. Ballast exchange effectively eliminates ANS by 1) discharging a percentage of them into the inhospitable environment of the ocean and 2) by increasing the salinity level within the ballast tank to a level such that those remaining cannot survive.

While ballast exchange is an important stop-gap measure for reducing the probability that fresh or coastal species will be transported in ballast water, it has limitations which prevent it from serving as a long-term solution. In fact, there are no universally applicable options of ballast water management that can satisfy safety requirements, environmental acceptability, technical feasibility, practicality, ship design, and cost effectiveness.

Factors that affect vessel stability, such as heavy sea conditions, age of the vessel, and configuration of the ballast tanks may preclude some vessels from safely conducting ballast water exchange. Vessels fully laden with cargo but which contain only residual amounts of unpumpable ballast water are unable to conduct ballast exchange. They are considered as carrying no ballast on board (NOBOB) and are exempt from the present ballast exchange regulations. Yet the

small amount of ballast water actually contained on board these NOBOB vessels is densely populated with ANS capable of invading U.S. waters. Apart from retrofitting vessels with prohibitively expensive equipment or retaining ballast aboard the ship, ballast exchange is the only feasible option at this time.

For the reasons listed above, the U.S. Coast Guard still considers ballast exchange an interim process and recognizes the present need to identify and develop an array of alternative ballast water management technologies that can be used to replace ballast exchange. Thus the U.S. Coast Guard is interested in testing various engineering devices to determine their capabilities and appraise their value for future use.

- 3.0 SCOPE: This study shall investigate the capability of specific engineering designs to kill or remove aquatic organisms from ballast water under realistic field experimental conditions. The investigation shall focus on various filtering systems that have been or can be coupled with secondary processes such as ultraviolet or chemical induced procedures to kill small organisms, larvae, and bacteria. The designs shall be evaluated during treatment of large volumes of water at high flow rates (1400 1500 U.S. gpm). The water for the tests shall be as close to natural as possible including turbidity at several levels and typical assemblages of organisms. Samples shall be taken in triplicate before filtering, after filtering and before secondary treatment and after secondary treatment to determine "percent kill" rate for each stage.
- 4.0 APPLICABLE DOCUMENTS: DOT Order 1700.18B, "Standards for the Preparation and Publication of DOT Scientific and Technical Reports"
- 5.0 REQUIREMENTS: The Contractor shall provide all personnel and engineering and technical services, as well as incidental materials necessary, to accomplish the following tasks:
 - 5.1 TASK A: FILTRATION AND ULTRAVIOLET SECONDARY TREATMENT
 5.1.1 Goal: Using an existing platform with a high
 suction lift pump (1500 U.S. gpm, maximum),
 filtration setup, and ultraviolet secondary
 treatment process, the Contractor shall conduct
 experiments to measure and verify the efficacy of
 pump, filter, and ultraviolet treatment in killing

or removing marine organisms.

- 5.1.2 Description of Task: The Contractor shall set up necessary piping and sampling ports, conduct processing tests, obtain and analyze samples, and report results. Specific tasks include:
 - 1) Provide platform, pump, filtration, and secondary UV treatment device with appropriate piping to allow withdrawal of representative water samples.
 - 2) Obtain, process, and analyze triplicate samples as defined below:
 - a) Obtain samples prior to filtering, after filtering and before secondary treatment, and after secondary treatment
 - b) Obtain and analyze triplicate samples taken at flow rates of 1400 1500 U.S.gpm and filter size of 40 50 microns.
 - c) Obtain and analyze samples at 3 turbidities (Low - ambient natural water; Medium - ambient natural water with induced, slightly raised turbidity; High - ambient natural water with induced, greatly raised turbidity). Contractor shall increase turbidity in accordance with Army Corps of Engineers permits.
 - d) Samples shall be taken for analysis immediately after experimental run and 18 hours after experimental run to study long term effects of treatment.
 - 3) Analyze samples to determine presence/absence of species as well as an estimate of viability. Analysis should include amount of biological organisms removed or killed at each stage of treatment.
 - 4) Analyze sample data to determine efficacy of filter and secondary UV treatment and the effect of turbidity.

5.2 TASK B: CYCLONIC FILTRATION AND ULTRAVIOLET SECONDARY TREATMENT

- 5.2.1 Goal: Using the same platform and high lift pump used in Task A, the Contractor shall conduct similar experiments using a hydrocyclonic filtration system with ultraviolet secondary treatment to measure and verify the efficacy of pump, hydrocyclonic filtration, and ultraviolet treatment in killing or removing marine organisms.
- 5.2.2 Description of Task: The Contractor shall set up

necessary piping and sampling ports, conduct processing tests, obtain and analyze samples, and report results. Specific tasks include:

- Provide platform, pump, piping with sampling ports, and catchment reservoirs for experiments.
- 2) Provide for hydrocyclonic filtration apparatus and secondary UV module to be tested. Contractor shall make arrangements with manufacturer or agent for such equipment.
- 3) Load and assist with set up hydrocyclonic filtration apparatus and UV module
- 4) Obtain, process, and analyze triplicate samples as defined below:
 - a) Obtain samples prior to filtering, after filtering and before secondary treatment, and after secondary treatment
 - b) Obtain and analyze triplicate samples taken at flow rates of 1400 1500 U.S.gpm through hydrocyclonic filtration unit.
 - c) Obtain and analyze samples at 3 turbidities (Low ambient natural water; Medium ambient natural water with induced, slightly raised turbidity; High ambient natural water with induced, greatly raised turbidity). Contractor shall increase turbidity in accordance with Army Corps of Engineers permits.
 - d) Samples shall be taken for analysis immediately after experimental run and 18 hours after experimental run to study long term effects of treatment.
- 5) Analyze samples to determine amount of biological organisms removed or killed. Analysis should include presence/absence as well as viability of organisms tested. Size category of organisms is also desired.
- 6) Analyze sample data to determine efficacy of hydrocyclonic filter and UV treatment.
- 6.0 Deliverables Draft and Final Reports: The final report shall discuss tests and results obtained during Tasks A and B. The report shall address work accomplished, data acquired, conclusions drawn, and shall provide comparison of results of turbidity on treatments tested and comparison of standard filtration vice hydrocyclonic filtration.

The draft final report and final report will be reviewed by the U.S. Coast Guard and be completed as a technical report under

the National Technical Information Service (NTIS) guidelines. The contractor shall follow DOT Order 1700.18B, "Standards for the Preparation and Publication of DOT Scientific and Technical Reports," in preparing the manuscript. The report shall be prepared using Microsoft Office for Windows NT 4.0 compatible software.

- 6.1 Contractor shall provide an interim report of findings of Tasks A and B. (Deliverable 1).
- 6.2 Contractor shall provide a final report of Tasks A and B. Final report shall discuss results of Tasks A and B and shall compare results of all tests. (Deliverable 2).

7.0 Contractor Requirements

- 7.1 Permits: Contractor shall obtain all necessary permits relating to increasing turbidity in and discharging increased turbidity water into natural water source. Contractor shall at all times be in compliance with permits and other applicable local, state, and federal regulations.
- 7.2 Safety: Contractor must comply with all federal, state, and local safety regulations at site. Platform must meet all safety standards.
- 7.3 Experimental Equipment: Contractor shall make all arrangements for use of hydrocyclonic filtration unit and secondary UV unit.
- 7.4 Pump: Contractor's equipment must be capable of pumping water at rates up to 1500 U. S. gpm.

8.0 Supporting Information

- 8.1 Progress Reports: Contractor shall maintain communication with U. S. Coast Guard Research and Development Center throughout project via telephone and e-mail.
- 8.2 Period of Performance:
 - 6.4.1 Field tests shall be performed between May 1, 2000 and November 1, 2000.
 - 6.4.2 Interim report is due February 2, 2001
 - 6.4.3 Draft final report is due May 1, 2001
 - 6.4.4 Final report is due July 1, 2001.

CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR) RESPONSIBILITIES

The COTR acts as the technical representative for the Contracting Officer by performing the following duties:

- a. Monitors Contractor Performance.
- b. Accomplishes on-site surveillance at the U.S. Coast Guard Research & Development Center or Contractor facility.
- c. Ensures that services remain non-personal in nature.
- d. Ensures that the Contractor performs within the scope of the Statement of Work set forth in the contract or task order.
- e. Monitors the use of Government furnished material, property, and equipment.
- f. Inspects and accepts or rejects contract services/deliverables and certifies invoices.
- g. Establishes and maintains a standard COTR file on assigned contracts/task orders.
- h. Notifies the Contracting Officer of any problems in the above areas, and of any unanticipated overrun of the estimated or ceiling price of the contract or task order.
- i. Provides a written evaluation of contractor performance to the Contracting Officer via the Contractor Performance Report.
- j. Reviews procurement requests prepared by the procurement originator to ensure that it presents a clear description of work to be accomplished and data to be delivered; and reviews or assists the procurement originator in preparing the independent Government cost estimate of resources (i.e., types and amount of labor, material, travel, etc.) required to perform the work described.

HISTORICALLY BLACK COLLEGES AND UNIVERSITIES

ALABAMA

Alabama A&M University

P.O. Box 1347 Normal, AL 35762 (205) 851-5000

Alabama State University

P.O. Box 271 Montgomery, AL 36101-0271 (334) 293-4100

Bishop State Community College

351 North Broad Street Mobile, AL 36690 (334) 690-6801

Concordia College

1804 Green Street Selma, AL 36701 (334) 874-5700

J.F. Drake State Technical College

3421 Meridian St, North Huntsville, AL 35811 (205) 539-8161

Lawson State Community College

3060 Wilson Road Southwest Birmingham, AL 35221 (205) 925-2515

Miles College

P.O. Box 3800 Birmingham, AL 35208 (205) 923-2771

Oakwood College

P.O. Box 107 Oakwood Road Huntsville, AL 35896 (205) 726-7000

Selma University

1501 Lapsley Street Selma, AL 36701 (205) 872-2533

Shelton State Community College

202 Skyland Boulevard Tuscaloosa, AL 35405 (205) 759-1541

Stillman College

3601 Stillman Boulevard Tuscaloosa, AL 35403 (205) 349-4240

Talladega College

627 West Battle Street Talladega, AL 35160 (205) 362-0206

Trenholm State Technical College

1225 Air Base Boulevard Montgomery, AL 36108 (334) 832-9000

Tuskegee University

Tuskegee, AL 36088 (334) 727-8011

ARKANSAS

Arkansas Baptist College

1600 Bishop Street Little Rock, AR 72202 (501) 374-7856

Philander Smith College

812 West 13th Street Little Rock, AR 72202 (501) 375-9845

Shorter College

604 Locust North Little Rock, AR 72114 (501) 374-6305

University of Arkansas at Pine Bluff

Pine Bluff, AR 71601 (501) 543-8000

CALIFORNIA

<u>Charles Drew University of Medicine</u> and Science

1621 East 120th Street Los Angeles, CA 90059 (323) 563-4800

DELEWARE

Delaware State University

1200 North DuPont Highway Dover, DE 19901 (302) 739-4901

DISTRICT OF COLUMBIA

Howard University

2400 Sixth Street NW Washington, DC 20059 (202) 806-6100

University of the District of Columbia

4200 Connecticut Avenue NW Washington, DC 20008 (202) 282-3681

FLORIDA

Bethune Cookman College

640 Mary McLeod Bethune Boulevard Daytona Beach, FL 32115 (904) 255-1401

Edward Waters College

1658 Kings Road Jacksonville, FL 32209 (904) 355-3030

Florida A&M University

Tallahassee, FL 32307 (904) 599-3223

Florida Memorial College

15800 NE 42nd Ave. Miami, FL 33054 (305) 626-3650

GEORGIA

Albany State College

Albany, GA 31705 (912) 430-4600

Clark Atlanta University

223 James P. Brawley Drive, SW Atlanta, GA 30314 (404) 880-8000

Fort Valley State College

Fort Valley, GA 31030 (912) 825-6211

Interdenominational Theological Center

671 Beckwith Street SW Atlanta, GA 30314 (404) 527-7700

Morehouse College

830 Westview Drive, SW Atlanta, GA 30314 (404) 681-2800

Morehouse School of Medicine

720 Westview Drive, SW Atlanta, GA 30314 (404) 752-1500

Morris Brown College

643 Martin Luther King, Jr. Drive, NW Atlanta, GA 30314 (404) 220-0270

Paine College

1235 15th Street Augusta, GA 30901-3182 (706) 821-8200

Savannah State College

Savannah, GA 31404 (912) 356-2186

Spelman College

350 Spelman Lane, SW Atlanta, GA 30314 (404) 681-3643

KENTUCKY

Kentucky State University

Frankfort, KY 40601 (502) 227-6000

LOUISIANA

Dillard University

2601 Gentilly Blvd New Orleans, LA 70122 (504) 283-8822

Southern University and Agricultural and Mechanical College

Baton Rouge, LA 70813 (504) 771-4500

Southern University, New Orleans

6400 Press Drive New Orleans, LA 70126 (504) 286-5000

Southern University, Shreveport

3050 Martin Luther King Drive Shreveport, LA 71107-8032 (318) 674-3300

Xavier University of Louisiana

7325 Palmetto Street New Orleans, LA 70125 (504) 486-7411

MARYLAND

Bowie State University

14000 Jericho Park Road Bowie, MD 20715-9465 (301) 464-3000

Coppin State College

2500 West North Avenue Baltimore, MD 21216-3698 (410) 383-5400

Morgan State University

Coldspring Lane and Hillen Road Baltimore, MD 21239 (410) 319-3333

University of Maryland, Eastern

Shore

Princess Anne, MD 21853 (410) 651-2200

MICHIGAN

Lewis College of Business

17370 Meyers Road Detroit, MI 48235 (313) 862-6300

MISSISSIPPI

Alcorn State University

Lorman, MS 39096 (601) 877-6100

Coahoma Community College

3240 Friars Point Road Clarksdale, MS 38614 (601) 627-2571

Jackson State University

1440 JR Lynch Street Jackson, MS 39217 (601) 968-2121

Mary Holmes College

Highway 50 West West Point, MS 39773 (601) 494-6820

Mississippi Valley State University

Itta Bena, MS 38941 (601) 254-9041

Rust College

150 East Rust Avenue Holly Springs, MS 38635 (601) 252-4661

Tougaloo College

Tougaloo, MS 39174 (601) 977-7000

MISSOURI

Harris-Stowe State College

3026 Laclede Avenue St. Louis, MO 63103 (314) 340-3366

Lincoln University

Jefferson City, MO 65102 (314) 681-5074

NORTH CAROLINA

Barber-Scotia College

Concord, NC 28025 (704) 786-5171

Bennett College

Greensboro, NC 27401-3239 (919) 273-4431

Elizabeth City State University

Elizabeth City, NC 27909 (919) 335-3230

Fayetteville State University

Fayetteville, NC 28301 (919) 486-1111

Johnson C. Smith University

Charlotte, NC 28216 (704) 378-1000

Livingstone College

Salisbury, NC 28144 (704) 638-5500

North Carolina Agricultural and Technical State University

Greensboro, NC 27411 (919) 334-7500

North Carolina Central University

Durham, NC 27707 (919) 560-6100

St. Augustine's College

Raleigh, NC 27610 (919) 516-4200

Shaw University

Raleigh, NC 27601 (919) 546-8200

Winston-Salem State University

Winston-Salem, NC 27110 (919) 750-2049

OHIO

Central State University

Wilberforce, OH 45384-3002 (513) 376-6011

Wilberforce University

Wilberforce, OH 45384-3001 (513) 376-2911

OKLAHOMA

Langston University

P.O. Box 907 Langston, OK 73050-0907 (405) 466-2231

PENNSYLVANIA

Cheyney University of Pennsylvania

Cheyney, PA 19319 (215) 399-2000

Lincoln University

Lincoln University, PA 19352 (610) 932-8300

SOUTH CAROLINA

Allen <u>University</u>

Columbia, SC 29204 (803) 254-4165

Benedict College

Columbia, SC 29204 (803) 256-4220

Claflin College

Orangeburg, SC 29115 (803) 534-2710

Clinton Junior College

P.O. Box 881 Rock Hill, SC 29731 (803) 327-7402

Denmark Technical College

Denmark, SC 29042 (803) 793-3301

Morris College

Sumter, SC 29150 (803) 775-9371

South Carolina State University

Orangeburg, SC 29115 (803) 536-7000

Voorhees College

Denmark, SC 29042 (803) 793-3351

TENNESSEE

Fisk University

1000 17th Avenue North Nashville, TN 37208-3051 (615) 329-8500

Knoxville College

901 College Street NW Knoxville, TN 37921 (615) 524-6500

Lane College

545 Lane Avenue Jackson, TN 38301-4598 (901) 426-7500

Lemoyne-Owen College

807 Walker Avenue Memphis, TN 38126 (901) 774-9090

Meharry Medical College

1005 D.B. Todd Boulevard Nashville, TN 37208 (615) 327-6111

Tennessee State University

3500 John A Merritt Blvd Nashville, TN 37209 (615) 963-5000

TEXAS

Huston-Tillotson College

900 Chicon Street Austin, TX 78702-2795 (512) 505-3000

Jarvis Christian College

P.O. Drawer G, Highway 80 Hawkins, TX 75765 (903) 769-5700

Paul Quinn College

3837 Simpson Stuart Road Dallas, TX 75241 (214) 376-1000

Prairie View A&M University

P.O. Box 188 Prairie View, TX 77446 (409) 857-3311

Southwestern Christian College

P.O. Box 10 Terrell, TX 75160 (214) 524-3341

Texas College

2404 North Grand Avenue Tyler, TX 75702 (903) 593-8311

Texas Southern University

3100 Cleburne Avenue Houston, TX 77004 (713) 527-7011

The University of Texas at El Paso

El Paso, TX 79968 (915) 747-5000

Wiley College

711 Wiley Avenue Marshall, TX 75670 (903) 927-3300

U.S. VIRGIN ISLANDS

University of the Virgin Islands

2 John Brewers Bay Saint Thomas, U.S. Virgin Islands 00802 (340) 776-9200

VIRGINIA

Hampton University

Hampton, VA 23668 (804) 727-5000

Norfolk State University

2401 Corprew Avenue Norfolk, VA 23504-998 (804) 683-8600

Saint Paul's College

406 Windsor College Lawrenceville, VA 23868 (804) 848-3111

Virginia State University

P.O. Box 9001 Petersburg, VA 23806 (804) 524-5000

Virginia Union University

1500 North Lombardy Street Richmond, VA 23220 (804) 257-5600

WEST VIRGINIA

Bluefield State College

219 Rock Street Bluefield, WV 24701 (304) 327-4000

West Virginia State College

Institute, WV 25112 (304) 766-3000

OMBUDSMAN NOTICE TO OFFERORS

It is the policy of the Coast Guard to issue solicitations and make contract awards in a fair and timely manner. To further this policy, the Commandant has created the position of Solicitation Ombudsman who is empowered to investigate issues raised by prospective offerors and resolve them, where possible, without expensive and time-consuming litigation.

Potential offerors who believe that a Coast Guard solicitation is unfair or otherwise defective should first direct their concerns to the cognizant Contracting Officer. If the Contracting Officer is unable to satisfy the concerns, the offeror should then contact the Coast Guard Solicitation Ombudsman at the address below:

Commandant (G-CPM-S/3) 2100 Second Street, SW Washington, DC 20593

Telephone (202) 267-2285 Fax (202) 267-4011

Potential offerors should provide the following information to the Ombudsman in order to ensure a timely response: Solicitation Number, Contracting Office, Contracting Officer, and Solicitation Closing Date.